

Appl No. 10/715,652
Response Date:08/26/2005
Response to Office Action

REMARKS/ARGUMENTS

Applicant respectfully requests reconsideration and withdrawal of the rejections in the May 31, 2005 Office Action based on the following remarks.

Pending Claims

Claims 1-11 are pending in the application. Of these claims, Claims 1, 6, and 11 are independent claims and the remaining claims are dependent claims.

Summary of Rejections

Claims 1-11 were rejected under 35 U.S.C. 102(b) as being anticipated by Torpey et al.

Turning to the specific claim language, independent Claim 1 is directed to a method for recording, on one recording medium, a positional information image representing positional information corresponding to at least positions on the recording medium and the other image, using a recording apparatus that applies a recording material onto the recording medium, the method comprising obtaining dot data of a color material forming the positional information image, according to record data for recording the positional information image, converting dot data of a color material forming said other image so that the dot density of the other image is reduced, on the basis of the dot data of the color material forming the positional information, and recording the images on the recording medium, according to the record data of the positional information image and the converted data of the other image.

The present invention of independent Claim 1 describes an image processing apparatus for obtaining dot data of a color material to form a positional information

Appl No. 10/715,652

Response Date:08/26/2005

Response to Office Action

image. According to the present invention, dot data of an ordinary image is not printed when the dot data of the ordinary image overlaps with the dot data of the positional image.

According to the Office Action., Torpey et al discloses all the basic structure of Independent Claim 1. Torpey et al is not seen to describe or disclose the present invention's feature of not printing dot data of an ordinary image when the dot data of the ordinary image overlaps with the dot data of a positional information image.

Torpey et al. is seen to provide a system and method for reducing intercolor bleeding that occurs at the interface between areas printed with inks having substantially different properties and to providing a method for maintaining edge quality at the interface of printed areas with non-printed areas. To reduce intercolor bleeding, the invention described in Torpey et al. carries out a process that operates to detect black/color interfaces where intercolor bleeding is likely to occur and to modify the pixels that are to be printed near the borders of the interfaces. The process comprises identifying an interface between a black area and a color area, modifying the pixel pattern in a black border region in the black area, and modifying the pixel pattern in a color border region in the color area.

According to the Office Action, Figure 2, steps 30, 32, and 34 of Torpey et al. teach the present claim's step of obtaining dot data of a color material forming the positional information image, according to record data for recording the positional information image. Figure 2 depicts a flowchart illustrating a method for reducing intercolor bleeding. In particular, step 30 identifies an interface between a black area and a color area, and a determination is made whether a given pixel is within the black or color border region. Step 32 defines a width N of the black border region near the black/color interface identified in step 30. Step 34 defines a width M of the color border

Appl No. 10/715,652

Response Date:08/26/2005

Response to Office Action

region near the black/color interface identified in step 30. The purpose of these three steps is to identify an interface between a black area and a color area and based on this identification, to define a black border region width and a color border region width near the identified black/color interface. Nothing in any of these steps, either alone or in combination, is seen to describe the present claim's step of obtaining dot data of a color material forming the positional information image, according to record data for recording the positional information image.

According to the Office Action, Figure 2, steps 36 and 38, of Torpey et al. teach the present claim's step of converting dot data of a color material forming the other image so that the dot density of the other image is reduced, on the basis of the dot data of the color material forming the positional information. Steps 36 and 38 modify the pixel pattern within the above described N-pixel black border and the M-pixel color border regions respectively. The purpose of these two steps is to modify pixels within the respective black/color border regions so as to reduce intercolor bleeding at the black/color interface, as well as lessen any perceived dissimilarities between the border region and the interior region of the corresponding image. Nothing in either of these steps, alone or in combination, is seen to describe the present claim's feature of converting dot data of a color material forming the other image so that the dot density of the other image is reduced, on the basis of the dot data of the color material forming the positional information.

According to the Office Action, column 6, lines 17-20 of Torpey et al. teach the present claim's step of recording the images on the recording medium, according to the record data of the positional information image and the converted data of the other image. Column 6, lines 17-20, describes that window 42 of Figure 3 shows the pixel block of

Appl No. 10/715,652

Response Date:08/26/2005

Response to Office Action

window 40 of Figure 3 after a substitution operation, where within a two pixel border, every other pixel in the black separation is turned off and replaced with alternating cyan and magenta pixels in the composite image. Nothing in Torpey et al. is seen to describe the present claim's feature of recording the images on the recording medium, according to the record data of the positional information image and the converted data of the other image.

Based on the foregoing remarks/arguments, Torpey et al. is not seen to describe or disclose the features of Independent Claim 1. Accordingly, Independent Claim 1 is believed allowable.

Independent Claims 6 and 11 are system equivalents of Independent Claim 1, and were rejected for the same reasons as Independent Claim 1. Thus, Independent Claims 6 and 11 are believed allowable for the same reasons set forth in the discussion above.

The remaining claims depend from one of the independent claims, and thus, are also believed patentable for the same reasons as discussed above. Because each dependent claim is deemed to define an additional aspect of the invention, however, individual consideration of each dependent claim on its own merits is respectfully requested.

Appl No. 10/715,652
Response Date:08/26/2005
Response to Office Action

CONCLUSION

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached at (949) 932-3329. All correspondences should be directed to the below-listed address.

Respectfully submitted,

Attorney for Applicants
Sivon Kalminov
Registration No. 40, 042

CANON U.S.A., Intellectual Property Division
15975 Alton Parkway
Irvine, CA. 02618
Facsimile: (949) 932-3560